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Pest Prevention

Outdoor Maintenance Practices

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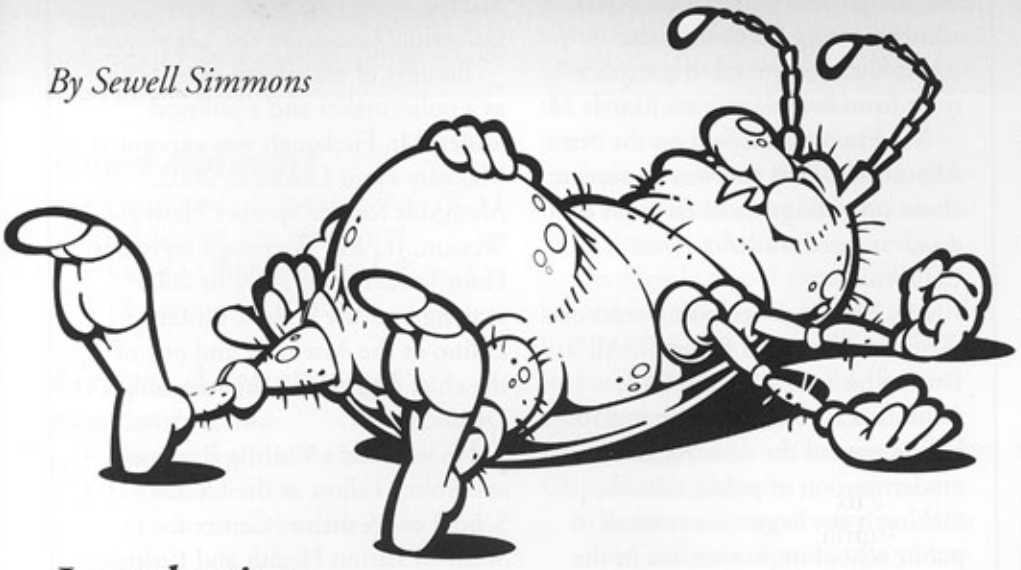

Introduction

Outdoor maintenance practices most essential to pest prevention in schools are those involving building exteriors and adjacent areas, lunch areas, athletic fields and playgrounds, landscaped areas, and refuse/recycling areas. Almost all indoor pests originate outdoors and gain access to the inside of buildings and other structures. Reducing and controlling the supportive habitat in building perimeter areas and eliminating pest access to buildings will do much to prevent structural pest problems. Pests of lunch areas, playgrounds, and refuse/recycling areas are attracted primarily by the availability of food. The common pests are rats, mice, flies, yellow jackets, and birds. In these areas, sanitation is the major maintenance requirement for prevention. In athletic fields and landscaped areas, turf pest control is best approached with preventive strategies, emphasizing maintenance of healthy turf. This involves proper selection of turf grass species for each environmental setting; proper irrigation, fertilization, drainage, mowing and aeration; and proper selection and placement of ornamental plants that will not limit turf growth. In landscaped areas, pest prevention is best accomplished with a strong emphasis on proper plant selection, placement, and care.

Below are practices that will help managers, staff, and contractors in planning outdoor maintenance. Sources listed in the reference section contain many additional suggestions.

Outdoor Maintenance Practices

BUILDING EXTERIORS AND PERIMETERS:

Exclusion

- Keep vegetation and wood mulch at least 12 inches away from structures. Keep plants at least 12 inches away from breathing vents of a foundation.
- Keep tree limbs and branches that might provide vertebrate pest access to buildings at least six feet away from building exteriors (ten feet if tree squirrels are a problem).
- Seal all plumbing; heating, ventilation, and air conditioning (HVAC); and electrical service entrances.
- Seal, or exclude with netting, all bird access to nesting sites.
- Keep doors locked tightly; equip doors with self-closures and door sweeps.
- Repair all broken panes in windows and/or skylights.
- Monitor buildings for access holes. Repair/seal all holes, cracks, and crevices to discourage hiding places or entry points for pests.
- Clean up wood debris from under and around structures.
- Eliminate all soil-to-wood contact. Stack pallets off the ground and away from buildings.
- During landscape renovation, do not raise the soil level against the building.
- Avoid placement of discarded equipment and/or materials next to building(s).
- Store materials and equipment on elevated racks at least 12 inches off the ground.
- Clear weeds, grass, and brush from building perimeters and from fence lines.
- Keep walls reasonably clean and free of dust, moss, and debris.
- Ensure that paving is in good repair.
- Discourage feeding of birds and other wildlife on campus.
- Discourage feeding of dogs and cats (feral, stray, or domestic) on campus.

Moisture management

- Prevent sprinklers from wetting stucco.
- Keep area under structures dry. Maintain proper drainage away from structures.
- Keep drains free so water flow is unimpeded.
- Inspect roofs and basements periodically to ensure there is no standing water or flooding.

- Where feasible, install gravel on the area around foundations and grade these areas away from the building to avoid basement flooding.
- Prevent shrubbery from blocking breathing vents in the foundation.

PLAYGROUND, ATHLETIC FIELD, LANDSCAPE, REFUSE/RECYCLING, PARKING LOT, AND LUNCH AREAS:

Sanitation

- Allow food and beverages only in limited, designated areas.
- Regularly sweep, pressure wash, and/or steam clean outdoor lunch areas.
- Equip all outdoor garbage containers with plastic liners.
- Equip all outdoor garbage containers with tight-fitting, spring-loaded lids to exclude pests.
- Empty garbage cans in outdoor lunch areas immediately after lunch and remove any food debris on the ground so that insects, rodents and birds will not be attracted to the site.
- Empty outdoor garbage containers frequently to prevent accumulated trash, particularly near doorways.
- Collect and properly dispose of litter from all school ground areas at least once weekly.
- Collect and move recyclables and stored waste off site at least once weekly.
- Clean all garbage cans and dumpsters regularly. Wash outdoor garbage containers on at least a monthly basis, including spill-contaminated areas around containers.

Moisture management

- Eliminate standing water on school grounds that may attract pests.
- Correct improper grading and poorly functioning drainage that may lead to standing water.
- Remove containers, repair potholes, and correct other features that collect water.

Maintenance of healthy turf

Turf weed control is best approached with preventive strategies that emphasize the maintenance of healthy turf. This involves proper selection of turf grass species for each environmental setting; proper irrigation, fertilization, draining, mowing and aeration; and proper selection and placement of ornamental plants that will not limit turf growth. Check with your University Cooperative Extension service for recommendations on turf types and management practices specific to your area.

- Raise mowing height for turf to enhance its competition with weeds; adjust cutting height of mower, depending on the grass type; sharpen mower blades; and vary mowing patterns to help reduce soil compaction.
- Water turf infrequently but sufficiently during morning hours to let turf dry out before nightfall; let soil dry slightly between watering. Check with your local Resource Conservation District or Cooperative Extension service for information on soil types and watering needs in your area.
- Provide good drainage, and periodically inspect turf for evidence of insect pests or diseases.
- Allow grass clippings to remain in the turf (use mulching mower or mow often) or compost clippings with other organic material.
- Test soil to determine pH and fertilizer requirements. Time fertilizer application appropriately to prevent problems caused by excessive fertilization.
- Use a dethatcher to remove thatch. Do this in early fall or early spring when over-seeding operations are likely to be most successful.

Maintenance of healthy landscape

Pest prevention in landscape plantings is best accomplished with a strong emphasis on proper plant selection, placement, and care.

- Prevent water stress in plants, yet avoid over-watering. Whenever possible, group plantings with similar water and other maintenance requirements. Maintain the optimum moisture requirement for each plant type.
- Use the appropriate pest-resistant plant variety. Select replacement plant material that is disease-free, disease resistant, and locally adapted (check with your local Cooperative Extension service).
- Use correct planting techniques, such as proper backfilling and depth of planting. These are an invaluable investment in the future health of plants.
- Use established soil fertilization practices.
- Avoid mechanical injury to plants.
- Remove wind-damaged branches.
- Use sanitation practices including the removal of diseased plants, pruning infected parts of plants, and removal of diseased branches.
- Remove susceptible plants if plant disease recurs and requires too many resources to treat.

GARDENS

- One of the best strategies to prevent insect problems is to adopt practices that promote healthy plants. The better the plants' needs are met for moisture, nutrients, and sunlight, the healthier the plant will be and the better it will fight off insect pests.
- Choose plant varieties that are well adapted to the local conditions, especially those that are known to be pest resistant. Adopt sanitary practices such as removing dead or

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decaying plant matter, keeping weeds at a minimum, and removing debris and standing water. Practice crop rotation. Physical barriers, like floating row covers, can be effective.

- To keep rats out of gardens, it is necessary to prevent their access. If possible, locate the garden in an area surrounded by open space, as rats are wary of crossing open spaces. Fencing and trenching are effective tools for further reducing access.
- Netting is available for protecting the garden from birds.

COMPOST PILES

- To discourage flying insect pests, do not place food scraps or animal manures in compost piles. Rats are also attracted to food scraps and to dry woody nesting materials.
- Discourage rats from nesting by turning and rebuilding the pile, paying special attention to shredding and moistening dry woody materials – rats dislike soggy conditions.

REFERENCES

Integrated Pest Management Kit for Building Managers. Massachusetts Department of Food and Agriculture, Pesticide Bureau, 100 Cambridge Street, Boston, Mass. 02202. http://www.pestinfo.ca/documents/IPMkitforbuildingmanagers.pdf

IPM Institute of North America, Inc. Part I. IPM Standards for School Buildings, http://www.ipminstitute.org/school_buildings.htm

IPM Institute of North America, Inc. Part II. IPM Standards for School Grounds, http://www.ipminstitute.org/school_grounds.htm

Responsible Pest Management: Best Practices and Alternatives http://www.pestinfo.ca/main/ns/9/doc/5

Rodent-Proof Construction and Exclusion Methods. Internet Center for Wildlife Damage Management, http://icwdm.org/handbook/rodents/RodentExclusion.asp

U.S. EPA, Pest Control in the School Environment: Adopting Integrated Pest Management, http://www.epa.gov/pesticides/ipm/brochure/

Wisconsin's School Integrated Pest Management Manual, Section I: Essential Elements of IPM, http://ipcm.wisc.edu/programs/school/sec1.htm

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